MYRMECIA

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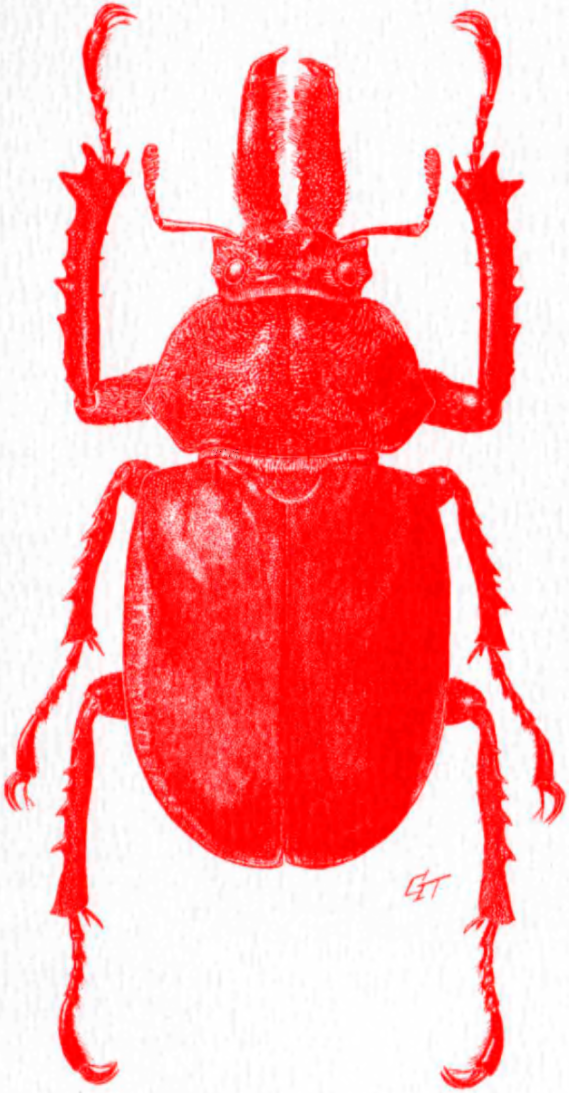

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THE COVER
Sphaenognathus (Australognathus) munchowae, a second Australian species of this Gondwanan Stag Beetle genus, recently described in the Memoirs of the Queensland Museum, by Barry Moore and Geoff Monteith. Illustration by Geoff Thompson, Queensland Museum.

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His Excellency, Major General Michael Jeffery AC CVO MC, Governor-General of the Commonwealth of Australia

SOCIETY SUSTAINING ASSOCIATES
Integrated Pest Management (Bugs for Bugs)

MYRMECIA

***MYRMECIA* WEB ADDRESS:**
http://www.agric.nsw.gov.au/Hort/ascu/myrmecia/myrmecia.htm

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NOTICE

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COPY DEADLINE FOR NEXT ISSUE

Material for the August 2005 should reach **Tish Silberbauer** at tsilberb@bio.mq.edu.au by **Friday 15th July 2005**.

Please submit text as .rtf files, and pictures as 300dpi .jpg files.

EDITORIAL

Hello again.

By now, many of you may have noticed that there has been a change in policy in the *Australian Journal of Entomology* to the effect that the journal no longer publishes book reviews. The reasons for this are to do with raising the profile (and citation index) of the journal by devoting more pages to invited review papers. Unfortunately, in order to do this without raising costs, the journal board had to find a way of making available space in the journal and this meant sacrificing book reviews. As a result book reviews will now become a regular feature of *Myrmecia*. In the future book reviews may be available through the Society web pages so that they are seen by a larger audience than the distribution of *Myrmecia*.

From time to time I'll be seeking people to review books and have decide that, in the absence of a Society email list, the best option is for me to send a message to the Ozentomology email list (more information at http://pobox.une.edu.au/mailman/listinfo/ozentomology). Those of you who would like to be notified of reviewing opportunities and do not wish to subscribe to the Ozentomology list can send their contact details to me at tsilberb@bio.mq.edu.au.

Whilst on the subject of the Journal, I would like to congratulate **Grant Herron**, who has agreed to be a Technical Editor for the Journal. I gather **John Mathiessen** is seeking one more Technical Editor to complete the team, so if you're interested I would suggest getting in touch with him.

There will be a change-over in personnel in *Myrmecia* too. I am unable to continue as editor beyond 2005, so am seeking someone to take over after I have finished with the fourth issue this year. It is an enjoyable and rewarding job, but my employment situation is restricting *extra-curricular* activities at the moment. If you are interested and are comfortable using MS Word and Adobe Pagemaker (or are willing to be trained!), please contact me (tsilberb@bio.mq.edu.au) or Murray Fletcher (murray.fletcher@agric.nsw.gov.au).

Tish SILBERBAUER

NEW MEMBERS

Welcome to **Sebahat Ozman-Sullivan**, Ondokuz Mayis University, Samsun, Turkey, **Wayne Robinson**, University of the Sunshine Coast, Queensland and **Joanne Dawson**, Tatura Victoria.

OBITUARY

Peter Roland Birks 1935 - 2004

A Foundation Member of the Australian Entomology Society Inc.

Peter grew up on the family's winery at Clare, South Australia, the home of the renowned Wendouree wines. He was a student at the Clare High School and then studied agricultural science at The University of Adelaide. He graduated with a B.Ag.Sc.(Hons), majoring in entomology and was dux of his final year. He then completed his M.Ag.Sc. in 1959. His thesis was concerned with polymorphism in aphids with particular reference to the influence of the host plant on the development of alate and apterous forms in *Aphis craccivora*. Dr Bruce Johnson was his supervisor and results from his studies suggested that all virginoparae of this species begin development as presumptive alatae — he found that both host plant and the form of the parent can irreversibly divert alatae from the alate course of development.

Peter left University life and joined the then Department of Agriculture, South Australia as a research officer, entomology on 16 November, 1959. He was the first enduring entomologist to be appointed by the South Australian Government (there was a short-term appointment of another entomologist at about the same time.). Peter specialised in insect pests of agronomic rather than horticultural crops. He started his research career in a frugal room in the Department's head office in the centre of Adelaide. An early project included studies on the biology and damage caused to strawberry clover seed crops by the clover seed moth, *Coleophora frischella*. His small room became an over-abundant mass of wall-to-wall cages in which to carry out his observations — a situation not facing young entomologists today.

Peter continued as the lone government agronomic entomologist for about five years. During that time he broadened his studies to a range of insect pest species and established sound contacts with the agricultural chemical industry. His good rapport with the chemical industry remained throughout his entomological career. This relationship was particularly important during the 1970s when organochlorine pesticides were being phased out of use and alternative pesticides were needed to sustain agricultural production. During the early 1970s, he was also heavily involved in some of the first field tests in Australia of the then novel, ultra-low-volume application of insecticide. The tests were carried out on black field cricket, *Teleogryllus commodus*, pea weevil, *Bruchus pisorum*, Australian plague locust, *Chortoicetes terminifera*, and the small plague grasshopper, *Austroicetes cruciata*.

In late 1964, Peter moved from his frugal beginnings to the spacious, new Departmental research laboratories at Northfield which were surrounded by an agricultural research station — he was one of the small band of founding occupants of the laboratories. The official opening of the laboratories in early 1965 by the Premier was memorable for Peter in that he had just discovered pea weevil in South Australia for the first time. What better occasion would there be to politically push the importance of fledging entomology in the Government than to have displays on the threat of this new pest to the rather important field pea industry? So be it, except that he forgot to let the Departmental hierarchy know of the new pest before the opening — there were red faces and a lot of explaining all round!

In 1965, the number of government entomologists and technical officers began to grow and Peter then became Leader of the Entomology Unit in the Agronomy Branch of the Department. He led the inaugural Unit until late 1979. During this time he was involved in research, extension, policy and regulatory aspects of insect pest control. He tackled and provided solutions for many new problems, including pea weevil; sitona weevil, *Sitona humeralis*; false wireworm, *Gonocephalum* sp. attacking sunflower seedlings; and established problems, including pests of stored products and their resistance to insecticides; forecasting climbing cutworm, *Helicoverpa punctigera*, and barley grub, *Persectania ewingii*, outbreaks; black field cricket; Australian plaque locust; and small plaque grasshopper. Peter developed and managed state-wide programs for the control of Australian plague locust incursions to SA — a thankless task in many ways. He also grasped and ran with the concept of integrated pest management, and encouraged and sought funds for his colleagues to become involved in biological control, insect damage assessment and holistic approaches to pest control, as well as continuing with necessary insecticide screening experiments.

He was a regular and active participant of national conferences and workshops addressing applied entomological issues during the 1960s and 1970s. He also attended several international Conferences.

He mainly published in extension articles, fact sheets and conference working papers. He developed a strong network with the applied entomological research and extension fraternity in Australia.

In late 1979, Peter moved from the Entomology Unit to the world of state quarantine and export inspection with the Department. In his dual role as Principal Plant Standards Officer and State Supervising Officer, Exports, he was responsible for South Australia's plant quarantine and export policy, legislation and inspection services. This responsibility necessitated close liaison with technical specialists, industry and interstate colleagues. His entomological and ecological background placed him in good stead for these roles. Peter was involved in and negotiated considerable change, especially in export policy. There was a fundamental shift from the Government being responsible for the quality of horticultural exports to industry being responsible for the quality of its own products.

Peter was a member of a number of state and national committees, including the Entomology Committee (a sub-committee of SCARM), the inaugural Australian Plague Locust Commission, and the National Stored Grains Working Party.

Peter retired from Primary Industries and Resources, SA, formerly his original Department of Agriculture, on 1 August 1990.

Peter certainly enjoyed being an entomologist, but also had a broad knowledge of agriculture and natural ecosystems, particularly the rangelands. In his retirement, he continued his forays into the rangelands collecting his beloved gibber grasshoppers. His specimens, particularly *Raniliella testudo*, *Phanerocerus testudo* and *Cratilopus* spp., were collected from gibber deserts ranging from Coober Pedy to western NSW, mainly in the period of about 1995 to 2003. His collections provide unique distribution data for both *R. testudo* and *P. testudo*. The specimens are now lodged with the South Australian Museum.

Peter had an unwavering commitment to his profession and to servicing primary industries and individual producers, whether it was through research, extension, legislation and policy to improve crop protection, quarantine and plant export inspections in South Australia and nationally. He provided a solid platform for these activities and, although sometimes conservative, strongly stood by his beliefs.

He deeply believed that public servants were there to service the public, and that research should be carried out to solve problems in the real world.

Peter ALLEN

NOTICES

DNA diagnostics of agricultural pests

Please contribute to the development of a universal DNA diagnostics system for insect pests by sending us specimens of your "favourite" pest species

NSW Department of Primary Industries has been awarded funding to develop a DNA-based diagnostic system for agricultural pest insects and mites using DNA Barcoding technology. This method will allow the rapid and accurate identification of almost any insect pest, regardless of developmental stage (egg, larva, pupa or adult) or geographic origin. The resulting database promises to have a profound impact on current practices in quarantine, integrated pest management, ecology and taxonomy. However, the whole enterprise is dependent on obtaining suitable specimens for initial characterisation. I am writing to request your assistance with obtaining the necessary insect specimens.

While there is nothing new about the use of DNA sequence data for diagnostics and systematics, what is novel about the DNA Barcoding approach is the scale at which this initiative is being run, e.g., the ultimate aim is to apply this system to all Australian pest insects within a few years. Researchers on other continents have already begun similar work in their regions. These systems will be completely interoperable because of standardisation on a single genetic marker.

The development of high-throughput DNA analysis technologies means that the biggest bottleneck in workflow will be obtaining suitable specimens. While museum collections are excellent stores of historical, distributional, and other data, high-throughput DNA analysis becomes too difficult with specimens that are older than approximately 10 years. Thus although pinned insect specimens may be useful, depending on their age and storage conditions, we also need specimens preserved in 95-100% ethanol. We would of course acknowledge all contributions in resulting publications and we are happy to discuss possible research collaborations. If you need collection vials and ethanol, and for further information please contact (or mail your specimens to):

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Willow sawfly *Nematus oligophilus* (Hymenoptera: Tenthredinidae) now established in Australia

CSIRO Entomology has recently been able to confirm the establishment of the willow sawfly, *Nematus oligosphilus*, feeding on willows (*Salix* spp.) around Lake Burley Griffin, Canberra, ACT. This species, previously unknown in Australia, appears to be well established in the ACT, Queanbeyan, Braidwood and Cooma areas in SE NSW. We are also aware of reports from the south coast of NSW and in the Adelaide hills of SA. It is not known how this insect arrived in Australia but it has not been introduced as part of any official bio-control program for willows. Anecdotal evidence suggests it has been in the Canberra area for at least two summers.

N. oligosphilus is of temperate northern hemisphere origin, where it occupies a wide range of latitudes. Recently it has become established in temperate areas of the southern hemisphere (Argentina, Chile, South Africa and New Zealand). In NZ it was first sighted in 1997 on the North Island between Auckland and Rotorua. By 2004 it had spread throughout both islands. Sawflies tend to show high host specificity and *N. oligosphilus* is restricted to the genus *Salix* and (so far only in South America) *Populus* spp. *Salix* species in New Zealand and Australia are exotic and were originally introduced for soil stabilization, river erosion control and as shelterbelt plantings to provide shade for stock. Whilst some willows, such as *Salix babylonica*, are still valued for their original purpose, as well as amenity and ornamental use, others, such as *Salix nigra* and *Salix fragilis* have spread rapidly and are now considered by many to be serious weeds of riparian environments. It is likely that perception of the impact of this insect in terms of its costs and benefits will differ between stakeholder groups.

In their region of origin, outbreaks of nematine sawflies tend to be short-lived, although repeated total defoliation may slow tree growth and even cause mortality, especially under drought conditions. The impact of this sawfly in Australia, where it lacks a full complement of natural enemies, is as yet unknown. In New Zealand, however, *N. oligiosphilus* has caused severe damage to willow plantings used for river bank stabilization and authorities there are investigating resistant varieties or use of alternative species. In Canberra, *N. oligiosphilus* appears to be continually brooded in summer and resultant heavy infestations are leading to repeated and severe defoliation of both unwanted weed willows and desirable amenity and shade plantings. It is highly likely that *N. oligiosphilus* will become established in other areas of southern Australia.

To identify this insect and the damage caused visit the following website maintained by NZ HortResearch http://www.hortnet.co.nz/publications/guides/willow_sawfly/wsawfly.htm

David REES, Kate STOKES and John LA SALLE

Rewarding outstanding Australian science

The **2005 Australian Museum Eureka Prizes** are now open with a record 10 prizes to reward outstanding Australian research. The prizes cover many areas of science including new awards for leadership in science, bioinformatics research and research which minimises the use of animals or animal products. They are also the largest national award scheme for research into critical environmental and sustainability issues facing Australia.

$10,000 Australian Catholic University Eureka Prize for Research in Ethics – for research that contributes to the understanding and development of ethical standards.

$10,000 Australian Skeptics Eureka Prize for Critical Thinking - for work that promotes rational thinking in the community and amongst young people.

$10,000 Botanic Gardens Trust Eureka Prize for Biodiversity Research – for research that contributes to the conservation of Australia's biodiversity.

$10,000 British Council Eureka Prize for Inspiring Science - for research, inventiveness, innovation or creativeness that has raised the profile of science, technology or engineering.

$10,000 Land & Water Australia Eureka Prize for Water Research - for research that contributes to the protection and sustainable use of Australia's water resources.

$10,000 NSW Ministry for Science and Medical Research Eureka Prize for Bioinformatics Research – for novel applications of bioinformatics tools.

$10,000 Royal Societies of Australia Eureka Prize for Interdisciplinary Scientific Research - for collaborative research involving scientists from two or more disciplines.

$10,000 Sherman Eureka Prize for Environmental Research – for research that leads to the resolution of an environmental problem or an improvement in our natural environment.

$10,000 University of New South Wales Eureka Prize for Scientific Research - for research undertaken by a young scientist that is deemed to be under-appreciated by the Australian public.

$10,000 Voiceless Eureka Prize for Research which Replaces the Use of Animals or Animal Products -

for work that has, or has the potential to reduce the use of animals in laboratory-based research.
Be part of Australia's largest single event that rewards outstanding scientific research and enter yourself, your team or your colleagues for an Australian Museum Eureka Prize.
For full details and entry forms go to the Australian Museum website www.amonline.net.au/eureka **Entries close Friday May 13.**

REPORTS

Science Meets Parliament 2005

Ray Akhurst represented the Society at SmP in March and provided the following report to the Society:
I have done the Science meets Parliament thing and tried to get Entomology onto a few radar screens. There was a terrific interest in SmP this year, with registration being completely filled several weeks ago (about 300 scientists). In the introductory session, we were told that only 5 politicians indicated that basic research was a subject of interest (compared with 100 scientists); the largest interest was in climate change, with urban/coastal development and nuclear issues also figuring fairly strongly.
My face to face meetings were with Ian Causley (Nat.), Member for Page (NSW) and Deputy Speaker and Senator John Cherry (Dem., Qld). The meetings were held with groups of 2-3 scientists. Discussion with Causley mainly focussed around water and the northern rivers, but we did spend some time talking about issues of science education. Sen. Cherry was most keenly interested in risk assessment of GM crops. We tried to interest him in biosecurity but his time was very limited and his focus on GM was very tight.
The issues that FASTS was keen to promote were the roles of science in climate change, the National Water Initiative, productivity and the balance of trade, and research infrastructure.
The forums organised by FASTS were understanding the drivers of public concern: a case study based on understanding and attitudes to stem cell applications, mobility and flexibility in global science and technology labour, climate change: what is the scientific consensus, and an hypothetical on a viral pandemic.
The after dinner speaker was Dr Caroline Kovac, General manager of IBM Healthcare and Life Sciences. She spoke about innovation.

Ray AKHURST

Entomological Society of New South Wales

In February the Society hosted a talk by **Stephen Fellenberg** of Insektus Pty Ltd on efforts to save the Lord Howe Island stick insect, *Dryococelus australis*. Stephen presented an overview of the campaign to save this endangered insect, why it became extinct on Lord Howe Island and growing threats to its existence on Balls Pyramid, its last refuge. Interestingly, the stick insect received a mention in a recent episode of Australian Story on ABC TV. The show was about a journey to Balls Pyramid by **Dick Smith** and other members of an expedition which attempted to climb Balls Pyramid in the 1960's. The expedition was responsible for the rediscovery of the LHISI, which until then was presumed to have become extinct.
In March, the Society held its Annual General Meeting. Unfortunately, insufficient members attended to form a quorum, and the election of officials for 2005 could not take place. The election was postponed to the April meeting, at which a quorum was made (just), and officials were duly elected. In April, the Society heard a fascinating account of changes in suburban insect populations by **Courtenay Smithers** of the Australian Museum. Courtenay has maintained records of abundance a number of species since the 1970's and he has noted a marked decline in some that were once quite common. Courtenay suggested that the ubiquity of street lighting may be an explanation for the increasing rarity of some species.

BOOK REVIEWS

Biopesticides of Plant Origin. Edited by Catherine Regnault-Roger, Bernard Philogone Jr, Charles Vincent, Lavoisier 2005.

There is something quite unsettling about agreeing to review a book and then finding that it has been written by 34 researchers spanning nine countries. There's a lot to review in this tome. So where to begin? It does have a pretty yellow cover illustrated with a stylized aeroplane dropping horticultural blooms onto a wheat crop, but as expected, this provides no shorthand value with which to assess the book's content. On opening, I was immediately encouraged to drift away, guiltily staring at my row of filing cabinets, on reading the wonderfully informative advice on the publisher's page: "Danger; Photocopying kills books". How many books have I unknowingly sent to an early grave?
This is a multidisciplinary work with 17 chapters providing a range of viewpoints and approaches across a very broad topic area. Despite the inclusive title, the focus is almost entirely on crop protection applications but this does not detract from the overall

Stephen Fellenberg with a juvenile Lord Howe Island stick insect

value of the information. The level of the writing varies between being suitable for undergraduate use to requiring significantly advanced knowledge. For example, Chapters 1 & 2 provide an overview of the traditional botanicals and the future scope for biopesticides that is eminently accessible and suitable fodder for honours-level essays. Further in, things get quite sticky. My favourite sentence comes from a chapter exploring the role of phenols in plant defence: "Diferulate cross-links form upon peroxidase-mediated dimerization of ferulic acid esters on polysaccharides" which hangs alone at the end of a section on cell wall reinforcement. Fortunately, most of the work is more expansive and thus more accessible. Chapters 3 & 4, although short, neatly provide enough information on new and potential biopesticide groups to whet the appetite of the aspiring researcher. Chapter 5 explores synergy and contains a useful section on the lignans which unfortunately omits much of what is known, not in the least because it ignores the gymnosperms. Chapter 6 explores sulphur compounds from garlic and crucifers in some detail and Chapter 7 is a detailed introduction to phytoecdysteroids of particular interest to anyone wanting a better understanding of phytophagous insect ecology. Chapter 8 looks at plant oils, but is unfortunately specific to the idioblast oil cells of avocados and is perhaps best not read if you are fondly consume this fruit. Chapter 9 explores using sulphur compounds and terpenes to protect stored legume seeds, and is definitely a good one for prospective student use. Chapter 10 asks whether allelochemicals can be tomorrow's herbicides and builds a strong affirmative case, though perhaps not sufficiently updated from the first edition. As hinted above, I got lost in Chapter 11, apparently lacking the assumed biochemical knowledge to assimilate the information without constant reference to other sources. Nevertheless, the deficiency here is mine and the chapter neatly explores the complex roles of phenols in plant defences. Nematodes provide the subject of Chapter 12 but the content is particularly stimulating for anyone with an interest in soils and perhaps, like me, holding a nagging doubt that I've ignored them at my peril.

In light of the recent addition to the US gastronomic lexicon of "freedom fries" to replace "french fries" it is perhaps worth the observation that all but perhaps three of the authors have distinctly Gallic roots or links with 20 being resident in France. Is it likely that France has produced 90% of the available expertise on biopesticides? Is the work damaged by a bias in author selection? Perhaps not as much as would be expected, but it does bring us to the book's actual origin. The first edition was originally published in French in 2000 and this translation, some five years later follows just a year after the Spanish version appeared. To those of us stumbling along with high school-level french skills, it is humbling at this point in the book to reflect that chapters 1 to 12 were all translated by Caroline K. Hatton who has performed similar feats previously for Lavoisier.

When I read the glib comment that the discovery of genetic material transfer in bee guts by Dr H-H Kaatz in 2000 is "not published", I'd immediately a mind to employ all the cunning of the lazy reviewer and neatly demonstrate my knowledge by pointing out a failure to properly update from the first edition. Chapter 13's review of the impact of transgenic plant proteins. How could this still be true when we've all heard so much about it. Alas, it's still true, even to the extent that the University of Jena has issued a clarification. Reminds me of the one about the guy who showed that fire ants could aid cotton yield.

It took a good deal of commitment to wade through Chapter 14's review of odour reception suppressor agents. It's good, worth the read, if only to gain insights into predator-prey relations. This contrasted nicely with the refreshing simplicity of Chapter 15's exploration of monoterpenes and oils–another chapter to whet the appetite of the aspiring researcher keen on affordable studies with great potential.

Those with an eye to quick commercialisation are quickly and neatly brought to ground by Chapter 16's exploration of the issues of commercialization. Definitely worth reading before rushing off to the APVMA and a much more useful section than the oddly tacked-on Chapter 17 which lists some post-harvest biopesticide systems in Africa.

Bearing in mind its origins and the immense amount of work that has gone into providing this English version I'm convinced that it is worth the 100+ Euros asking price and am sure that you'll gain some useful perspectives from it, especially if, like me, you find the pace of advances in molecular biology and analytical chemistry a little dazzling.

Don EWART

Zygaenidae Moths of Australia: A Revision of the Australian Zygaenidae (Procridinae: Artonini). by Gerhard M Tarmann. Hardback 320 pages, 64 colour plates, genitalia photographs, distribution maps. CSIRO Publishing. ISBN 0643067981. Price: $ 180.

The Zygaenidae is one of the many Australian Lepidoptera families that, until recently, has not attracted as much attention as it deserves. Zygaenids are remarkable day-flying moths with an unusual appearance and fascinating biology. Of the four currently recognised subfamilies (Zygaeninae, Chalcosiinae, Callizygaeninae, and Procridinae), only the Procridinae (forester moths) have a world-wide distribution. Australian Zygaenids, all belonging to the subfamily Procridinae, are divided into two tribes Artonini and Procridini; all species except one are endemic. They are often small and dark, yet, in the sun the reveal their beautiful, metallic scales shimmering in various colours from red, to green and blue. Other species exhibit a wasp-like appearance and are perfect examples of Batesian mimicry. Additionally, all species of Zygaenidae are unusual in being capable of releasing hydrocyanic acid, a highly toxic substance which they can synthesise de novo. They can also detoxify hydrogen cyanide and are highly resistant to these poisons.

This book, the seventh volume of the Monographs on Australian Lepidoptera and first comprehensive monograph on the Australian Zygaenid moths, was written by Gerhard Tarmann, one of the world leading experts on this attractive and biologically interesting family. Knowledge about the Australian Zygaenidae has been very fragmentary until now, based only on the original descriptions and a paucity of subsequent papers. The present book describes the Australian Zygaenidae, commonly known as burnet and foresters, to the species level, and provides detailed insight into the morphology and phylogeny of the family. The beauty of the Zygaenids is captured in 114 larger-than-life portraits by the artist and entomologist **Frantisek Gregor**, a well-known illustrator and editor, famous for his contributions to the Microlepidoptera Palaearctica series. As many groups of the Australian Zygaenidae, in particular of the genus *Pollanisius*, are taxonomically difficult with few reliable diagnostic characters, the fine details of colouration, even the lustre of the metallic scales, are often the only means to separate species. The exquisite paintings, detailed portraits originally created at a ten-fold magnification of the moth, are crucial as they depict these subtle diagnostic details.

Comprehensive general chapters discuss Zygaenid morphology, biology, phylogeny and classification, with considerable new information of word-wide relevance. After a short introduction, the author gives an overview of the morphology of Australian Zygaenidae along with spectacular scanning electron micrographs of the adult and preimaginal morphology. The following chapter is devoted to the biology and life history of the Australian Zygaenidae. Tarmann gives a general overview over the highly specialised bionomics, behaviours and feeding habits of the members of this family and describes the unusual mechanisms of cyanogenesis and resistance to cyanides, which is part of the highly specialised defence biology of the Zygaenidae. Another main chapter of the study is devoted to the phylogeny of the Australian Zygaenidae based on a detailed analysis of the adult morphology. The Australian fauna is placed into a world context and leads to a possible history of Australian Zygaenidae with the convincing conclusion that Australia was invaded several times independently by ancestors of the current species. The main part of the book comprises a systematic treatment of all Australian Zygaenidae species. The type material of all Australian species has been examined by Gerhard Tarmann who studied all relevant museum collections, including the famous British Museum in London which houses most of the type material of species described in the 19th and 20th century. The taxonomic part is accompanied by separate keys to the genera and species of the family occurring in the region. The genitalia of all species are figured in black and white photographs. The book provides in depths treatments of the 10 genera and 43 species known to occur in Australia, including 4 genera and 21 species being described as new to science. Another 8 species are figured and characterised, but not named due to insufficient material. This clearly indicates that despite this comprehensive study, unknown taxa will certainly be found in future.

Descriptions of all taxa are followed by a short account of the bionomics, preferred habitats and distribution. Tarmann and his collaborators spent much time in the field in Australia resulting in the inclusion of life histories for five genera, namely

Pollanisius, *Hestiochora*, *Australartona*, *Myrtartona*, and *Turneriprocris*. The biology, phenology and behaviour of the majority of the Australian Zygaenidae, however, remain unknown leaving plenty of field work for future generations of Lepidopterists. For all species, subspecies and synonyms the original descriptions are cited together with the type localities and the collection in which the types are preserved. The scholarly and lucid text is complemented by the exquisite illustrations which set the benchmark against which others will be judged. On 57 colour plates all known species, usually male and female specimens, are figured in about 7x to 10x of their original size. This section is followed by 7 plates with photographs showing details of the adult morphology, larvae and Zygaenidae habitats. A minor criticism refers to the style of the genitalia illustrations. Although one should appreciate that the figures show all structures in due detail it has to be stated that the figures could have been provided in a more space saving manner. Valva for instance could have been shown complete rather than split on two different figures. The volume closes with an appendix providing a list of all localities cited in the book and an extensive bibliography of the relevant literature.

This book provides a solid foundation for any subsequent study; it is the only comprehensive work on Australian Zygaenidae presently available and combines detailed and specific data on the systematics and taxonomy with practical information and excellent illustrations helpful for anyone who has the intention to become familiar with this group of diurnal moths or who simply wants to identify specimens collected in the field.

Axel KALLIES

EXECUTIVE REPORT

New members

Sebahat Ozman-Sullivan, Ondokuz Mayis University, Samsun, Turkey
Wayne Robinson, University of the Sunshine Coast, Qld
Joanne Dawson, Tatura Victoria

Resignations

John ARDLEY, Port Frederick NSW
Philip BARTON, Geelong Victoria
Josephine CARDALE, Belconnen ACT
Derek DUCKHOUSE, Clarendon SA
Humphrey ELLIOTT, Hobart Tasmania
Dzintra LACIS, USA
Marie VITELLI, Charters Towers Queensland
Colin WILSON, formerly NT

Lost members

Mail for the following members has been returned. If anyone can help with a new contact mail or email address, please send details to the Treasurer at thwaiteau@yahoo.com.au.
D Hull (was Brisbane)
AK Martin (was Melbourne)
AH Duale (was Katherine)
KL Abbott (was Melbourne)

From the minutes

The Executive is pleased to announce that **Grant Herron** has accepted the role of Technical Editor for the Journal. The Chief Editor, **John Mathiessen**, is seeking another member to add to his team of technical editors.

The Society has nominated Professor **Brian Kay** of the Queensland Institute for Medical Research for the Prime Minister's Prize for Science in recognition of his work in eradicating dengue and dengue haemorrhagic fever from large parts of Vietnam at a time when these diseases are reaching epidemic proportions in much of the tropical world.

Science Meets Parliament. The society was represented at this event by **Ray Akhurst** and the Executive thanks Ray for his willingness to participate and for his informative report, which is published elsewhere in this issue of *Myrmecia*.

Plans for the 2005 Society conference are progressing well under the guidance of an organising committee headed by **David Yeates**. Details are provided on the conference website http: www.invertebrates2005.com. Preparations are also being made for the 2006 Society conference which will be held in South Australia, probably in conjunction with the New Zealand Entomological Society (we are awaiting ratification from across the Tasman). A joint conference was held at Lincoln University in 1996 and a decision was subsequently made by the Executives of both societies that regular joint meetings would be held, alternating between New Zealand and Australia. This hasn't happened so far but we are hopeful that we can established such joint activities over the next few years.

Treasurer **Graham Thwaite** thanks all those who have paid their 2005 subscriptions. By the time you read this, reminders will have been sent to those who have overlooked payment. The Treasurer will appreciate your quick response. Receipts will be mailed to those who requested them before the end of June. Any member who requires a receipt before then can ask Graham to email one to them. The Executive is also aware that it still needs to send out some back issues of the Journal and *Myrmecia*

to a few members. That task has not been forgotten and we apologise for the delay.
Graham Thwaite and **Andrew Mitchell** (with support from **Holger Löcker**) have spent many hours upgrading the membership database to make it more user-friendly and ensure that distribution errors that occurred with the last issue of *Myrmecia* won't happen again. It is currently up to date (he says hopefully, crossing his fingers).

Murray FLETCHER

AUSTRALIAN CAPITAL TERRITORY

ANU

Trudi Wharton submitted her thesis on the pine tree aphid *Essigella californica*. The work was an ecological study of the aphids in three locales in the ACT, and she succeeded in having all these aphids disappear prior to her completion. **Stuart Dennis** is busy writing his thesis on the effect of oestrogenic compounds on moulting in aquatic insects and is heading off to Panama for a year in the tropics. **James Woodman** is in the midst of measuring respiration on a number of arthropods, trying to understand the process of discontinuous respiration. **Kim Kingston** continues to commute between Rutherglen and the ANU to help understand the basic biology of phylloxera. She is planning on going to Spain for the Society of Experimental Biology meetings this year to present some of her data on feeding in phylloxera using the electrical penetration graph technology.

Paul D. COOPER

Australian Plague Locust Commission

All APLC staff are breathing a sigh of relief after the biggest locust control campaign in the organisation's history. Aerial spraying of swarms of Australian plague locust in the Riverina area of NSW concluded on 15 March. Since mid-February, over 150,000 hectares of swarms in the Hay, Narrandera, Riverina and Murray Rural Land Protection Boards have been sprayed. Swarms infesting substantial areas of the Tambo Shire in Queensland were also sprayed during early to mid-February. With the conclusion of spray operations, APLC field staff have resumed surveying locusts prior to the end of the season. A number of egg beds have been located and it is suspected that there may be significant activity in spring.
After more than 27 years with the APLC, **David Hunter** retired from the organisation in early April. David joined the APLC in 1977 and perhaps his most lasting contribution to the sustainable management of locusts in Australia and elsewhere will be the development and commercialisation of Green Guard®. Dave collaborated with **Peter Spurgin** (APLC) and **Richard Milner** (CSIRO Entomology) since 1993 to develop this product, which gained registration from the APVMA in March this year. In a similar vein, after a substantial association with the organisation **Paul Walker** is leaving the APLC to commence a position at the University of Tasmania in Hobart. Paul will work with **Geoff Allen**, **Jane Elek** and **Noel Davies** on the chemical ecology of Autumn gum moth and scarab beetles, both of which are pests of commercial bluegum plantations. On his way back to Canberra after 10 days in central Australia surveying locusts, **Martin Steinbauer** caught up with **Andrew Loch** in Wagga Wagga to discuss possible joint research projects of mutual interest to the APLC and NSW Agriculture.

Martin STEINBAUER

School of Physical, Environmental and Mathematical Sciences, The University of New South Wales at the Australian Defence Force Academy, Canberra.

The Insect Monitoring Radar (IMR) at Bourke, NSW, was brought back into operation in August 2004 and has operated almost continuously over the 2004-2005 insect flight season, detecting several significant migration events. Not surprisingly, given that it has been a "locust year", the radar echoes detected on these occasions have mostly had characters (size, shape, wingbeat frequency) indicative of Australian plague locusts. Movements have been seen in almost all directions, suggesting this species is even more opportunistic in its migrations than has hitherto been recognized. **Shane Hatty**, the project engineer, and **Alistair Drake** have made several visits to Bourke to upgrade and service the unit there. The software system for analyzing the IMR data and presenting the observations has been extensively reworked over the last year, and summaries are now again being passed to our collaborators at the Australian Plague Locust Commission.
Alistair Drake made a presentation on the IMR project at the International Conference on Plant Protection in Beijing in May 2004, and followed this with a visit to his long-time collaborator Prof. **Bao-ping Zhai** at Nanjing Agricultural University, where an entomological radar of the IMR type is currently being developed.

Alistair DRAKE

NEW SOUTH WALES

University of Sydney

The Marsh Lawson Mushroom Research Unit was officially opened on 8 December 2004 by Prof. Beryl Hesketh, Pro-Vice-Chancellor (Sciences and Technology). The Unit is funded by the Australian Mushroom Growers Association, Mushroom Industry Levy, Sylvan (Australia), Farmoz (now Makteshima-Agan), Horticulture Australia and University of Sydney. The Unit is a small scale mushroom growing facility using the same technology as the commercial industry. The projects undertaken involve pests, diseases and pesticide evaluations: to achieve international recognition for the pesticide residue results, accreditation by NATA for Good Laboratory Practice (GLP) is being sought. The role of arthropods as vectors of mushroom fungal diseases is a primary focus of the Unit.

Afsheen Shamshad is working on mushroom flies and dry bubble disease, caused by *Verticillium fungicola*, for her PhD. She is examining the epidemiology of dry bubble with and without mushroom flies. These results have major implications for management of the disease on commercial farms.

Alan CLIFT

University of New England

In amongst the usual rush of the beginning of undergraduate teaching for the year, the good news in **Peter Gregg's** Insect Pest Management group is the completion of not one, but two PhD theses. **Sam Lowor** has handed in his thesis on the pheromones of occasional pests in cotton, and **David Britton** has handed in his thesis on using sex pheromone to control *Helicoverpa armigera*. Sam is heading back to Ghana in May to resume work at the Cocoa Research Institute, whilst Dave continues happily as Collections Manager of Entomology at the Australian Museum.

Tish SILBERBAUER

NSW DPI, Orange Agricultural Institute

Natura Morta Exhibition. Two series of paintings of insect pests by **Emil H. Zeck** and a series of paintings of plant diseases by **Margaret Senior** are currently on display in the foyer of the NSW State Records Gallery in the Rocks in Sydney. This is the first time that many of these original watercolours have ever been on public display. Zeck did a series for the NSW Better Farming Train in the 1920s and a later series for insect pest leaflets in the late 1950s. Margaret Senior did her series in the 1960s. The exhibition was opened on 4 March by the NSW Minister for Primary Industries and the opening was attended by former colleagues of both artists, representatives of the University of Newcastle's Natural History Illustration Course (who have an annual Margaret Senior award) and members of the Agricultural Scientific Collections Trust as well as staff and friends of NSW DPI and NSW State Records. The exhibition will continue at the State Records Gallery (2 Globe Street, off George Street) until June 25th so if you are in Sydney before then, drop in for a look.

The exhibition was open as part of the Sydney Museums' Discovery After Dark which saw more than 30 museums in Sydney open from 6pm to midnight on 2 April. The Scientific Collections in Orange were also open to the public for the first time in five years as part of NSW First for Biotechnology Week. We used the opportunity to promote the use of the collections for development of DNA technology, interactive and web-based diagnostic keys and data sharing through APPD (yes, we know we're still not live to air on APPD but we've been working hard on fixing the problems which are mainly software based.)

Danuta Knihinicki is back from maternity leave three days per week and, with the recent retirement of **Bruce Halliday**, is now the only specialist acarologist in Australia in permanent employment – a parlous state of affairs indeed! Danuta recently hosted a visit by four researchers from Macquarie University who are working on external parasites of native mammals and have found some interesting mites. **Andrew Mitchell** has started setting up his lab to barcode the agricultural pests of New South Wales and has already managed his first official overseas trip. He attended the First International Conference for the Barcoding of Life, held in London in February. Major aims of the conference were to expand the international community of barcoding researchers (the 220 participants were from 47 countries), to showcase major projects collecting or utilising DNA barcode data and to standardise data collection as far as possible, through the establishment of Working Groups. A number of very impressive data sets were presented and clearly this field is poised for rapid progress which will have profound impacts on our ability to diagnose insect species. **Peter Gillespie** is also looking forward to his first official overseas trip heading off to Thailand to share his diagnostic expertise on Aleyrodidae. His trip will be supported by DAFF. **Holger Löcker** is now working virtually full-time at OAI supporting fruit fly monitoring, monitoring for yellow crazy ants and sorting through leafhoppers caught on sticky traps in vineyards of South Australia's Riverland and the MIA in NSW.

Murray FLETCHER

NORTHERN TERRITORY

Northern Australia Quarantine Strategy

Glenn Bellis made the most of a February trip to Canberra to attend a quadripartite meeting on quarantine issues by fitting in a visit to ABRS to meet with **Alice Wells** and **Alan Dyce** to discuss the production of a wing picture atlas of the biting midges (Culicoides) of Australasia. It is hoped that the atlas will be produced by July 2006. We now have our work cut out for us to meet this deadline. Apart from that, Glenn conducted an insect pest survey of the East Timorese province of Oecusse. East Timor is always an interesting place to survey but it gets pretty hot on those rice paddies in February.

Department of Business, Industry and Resource Development

Brian Thistleton, **Graham Brown**, **Stuart Smith** and **Deanna Chin** attended the International Congress of Entomology (ICE) in Brisbane in August last year. Stuart and Deanna submitted a paper on grower adoption of integrated pest management in tree crops. All four were overwhelmed with the size of the venue and the number of delegates that attended. It was also a good opportunity to see thousands of entomologists at one venue.

Prior to the Congress **Tracie Jenkins** (Univerisity of Georgia), **Susan Jones** (Ohio State University) and **Scott Kleinsmidt** (BASF) visited Darwin to collect termites for taxonomic and DNA studies. Brian and **Michael Neal** took them on a collecting trip to Katherine, and they also had discussions with Graham.

Following ICE, Professor **Yoshimi Hirose**, from Kyushu University, spent several days at Berrimah Farm working with **Lanni Zhang** on *Thrips palmi* predators.

Brian and Michael Neal are continuing with their termite trials in Darwin, Katherine and Ti Tree (near Alice Springs). **Heather Wallace** is assisting Brian and Michael with life cycle studies on *Conogethes pluto* which is a major pest of ornamental gingers. Recently Heather has fought off mosquitoes and leeches in her efforts to sample infested alpinia canes and to test pheromone traps.

Megan Hoskins was a runner-up in the 2004 Rural Women's Award that included a bursary from RIRDC. Megan took this opportunity to attend a short course on soil biology at the Southern Cross University. The studies concentrated on the association between soil biology and plant health. Megan will use this knowledge to assist her own work and may become involved with future studies on biological farming and how this can assist in suppressing plant pests & diseases.

Deanna and **Haidee Brown** have recently visited Megan in Katherine to complete a field trial on the effect of thrips on developing mango fruit. Deanna, Haidee and **Gerry McMahon** (Horticulture DBIRD) held an integrated pest management workshop for rambutan growers in early October.

Graham is continuing with his work on the taxa table for AQIS. Graham gets the occasional break when he is required to do an inspection on an illegal fishing vessel for exotic termites and borers. Lanni has been assisting with these inspections but has lately become seasick!

The Section launched their new website in July and this can be viewed at www.entomology.nt.gov.au

Department of Health and Community Services

Dengue mosquito eradication project, Tennant Creek

The dengue mosquito *Aedes aegypti* is capable of transmitting the dengue virus that causes a serious and potentially fatal illness. Dengue outbreaks caused hundreds of deaths in South East Asia last year, and at least one death in north Queensland. The NT has been free of *Aedes aegypti* and hence dengue disease since the late 1950s. This is despite many instances of importations from overseas into port areas of Darwin and their immediate elimination by AQIS and MEB using larval control, chlorination of receptacles to kill eggs, and adult fogging.

The dengue mosquito was discovered breeding in Tennant Creek in February 2004, after being detected in a routine mosquito-trapping program using carbon dioxide baited EVS traps. An initial survey and control program was started immediately after detection, and ran until April 2004. The field aspects of an eradication program were begun in late November 2004 and are now well under way.

An initial survey and control program was implemented immediately after the detection, and received widespread community support. The aim of the initial survey was to determine the presence and extent of the *Aedes aegypti* mosquitoes, and involved surveying urban and semi-rural areas throughout Tennant Creek and inspecting water-holding receptacles for mosquito larvae. The team also set mosquito traps, including sticky traps and bifenthrin insecticide impregnated lethal egg traps (lethal ovi traps) designed for detecting or killing *Aedes aegypti* mosquitoes. Initial surveys also involved inspection of water receptacles in the nearby towns or localities of Ali Curung, Three Ways, Mataranka and Elliot. A comprehensive public

relations and information program was initiated to inform and seek assistance from local residents, councils and authorities. A hot line advisory service was established. Posters were put up at supermarkets and talks were given at local schools. Newspaper news items and notices were regular features in the local and NT wide newspapers.

The control program initially involved; a door-to-door education campaign on how to eliminate breeding sites, the distribution of cans of aerosol insecticide surface spray to all Tennant Creek householders with instruction to spray all potential water holding receptacles in their yards and premises, treating most premises by the control team in cooperation with the occupier of the premises, a fogging operation of the town with assistance from the Alice Springs Town Council, a survey and treatment of transport hubs, and a hard rubbish roadside collection from all residences with all rubbish collected buried at the local tip.

During the initial eight-week control program from February to April 2004, a total of 1087 of 1107 properties in Tennant Creek were visited and treated by the team. This included occupied residential blocks, vacant blocks, vacant houses, and industrial, business and rural blocks. The rest of the premises were progressively inspected by ad hoc visits by MEB during the dry season.

The survey found 91 different premises breeding *Aedes aegypti* mosquitoes. This represented over 8% of premises positive for *Aedes aegypti* larvae. The range of receptacles with dengue mosquitoes includes bird baths, dog bowls, old tyres, buckets, pot plant drip trays, ice cream containers, jars, disused evaporative air-conditioners, plastic trays, sheets of plastic, machinery, an unkempt spa, a vase, a compost bin, a boat, a tarpaulin, an old car body, and a range of other artificial receptacles that held water.

Of the 58 premises with rainwater tanks, 53 were successfully treated during the period and the rest were followed up later in the dry season for inspection and treatment.

There were 15 EVS traps positive for *Aedes aegypti* out of 77 traps set in Tennant Creek over the period, with 23 adults collected, including 4 males. The sticky and lethal ovi traps did not detect many adult dengue mosquitoes or their eggs respectively, with only the one lethal ovi trap positive for *Aedes aegypti* eggs, although this low result was partly due to the ready availability of alternate breeding sites and the limited number of traps used.

CSIRO Sustainable Ecosystems

Alan Andersen, Ben Hoffmann, Kate Parr and **Tracy Dawes-Gromadzki** all presented papers at the International Congress of Entomology in Brisbane in August. Ben Hoffmann is continuing with the yellow crazy ant eradication in NE Arnhem Land, and attended the Tramp Ant Workshop in Canberra which aims to create a Threat Abatement Plan for exotic ants in Australia. After ICE, Kate Parr had a tough few weeks away on field trips. The first, to Fraser Island, followed the ICE conference, when she and Alan Andersen were hosted by **Wayne Robinson** and **Peter Collier** (University of the Sunshine Coast). They spent time checking out Peter's Honours fieldwork sites and of course having a good look at the ants too. In September things got a bit more adventurous when Kate accompanied a Masters student (**Lauren Barrow**) from Macquarie University on an ant sampling trip to Purnululu National Park in Western Australia. Kate is co-supervising Lauren's project which is looking at the ants of the Bungle-Bungles in relation to habitat type and fire management. Tracy Dawes-Gromadzki has been busy planning an upcoming field trip to Charters Towers. This trip will mark the new phase of the soil biota and soil function Tropical Savannas CRC project that she is leading. The trip will involved the installation of automated data logging system for soil moisture probes that will be installed in different patch types within a grazing experiment to examine the relationships between soil macrofauna assemblages, water infiltration and soil function (...and also mean that she can download data for each rainfall event over the wet season while sitting in her air conditioned Darwin office...).

Tracy DAWES-GROMADZKI

PAPUA NEW GUINEA

PNG Plant Protection Conference: The 2nd PNG Plant Protection conference was held at Unapope, Kokopo from 11-14 November 2004. The theme was 'Pests and diseases incursions: risks, threats and management. The conference was officially opened by the Governor of East New Britian Province, Hon. **Leo Dion**. **Glynn Maynard** of AFFA, Canberra was the guest speaker who used Australian experience to expand on the Conference theme. More than 30 technical papers were presented and over 100 participants attended the conference with some coming from Australia and Fiji. The good news is that **Terry Price** has been landed the job of editing the proceedings and Australian Centre for International Agricultural Research has offered

assistance for its publication which should be available by the time of the next conference. The next conference will be in 2006 in Lae, Morobe Province.

NAQIA: **Marjorie Kame** has left early this year for a MSc course in entomology at University of Queensland, Brisbane. **David Tanakanai** has been very much involved in testing a lure for the red banded mango caterpillar. A lure has been identified and further field tests will be carried out in the coming months. **Roy Masamdu** (NAQIA) together with colleagues from SPC Fiji and QUT (**Anthony Clarke** and **Amy Carmichael**) are developing a taro pest key for the Pacific Islands.

Ramu Sugar: **Lastus Kuniata** held a meeting with **Barnabas Wilmot** (Environment & Conservation) and **David Tanakanai** (NAQIA) to develop a format/ conditions for importing and releasing of biocontrol agents. **Kaile Korowi** has been digging for white grubs in both sugarcane and young oil palms. The results from the use of Confidor for white grub control appear to be promising. **Julie Sip** has also been getting promising results in the control of cicadas in sugarcane with use of Confidor.

PNG OPRA: **Bill Page** left OPRA at the end of 2004. His replacement, **Charles Dewhurst** from UK has been appointed but has yet to start work. Before his departure, Bill was working on the importance of parasitic nematodes in the oil palm pollinating weevils. There was an outbreak of Sexava pests on oil palm at Haggy Plantations towards the end of 2004 but this has now been brought under control.

Cocoa & Coconut Institute: **Vele Pat** is now the new CEO of the Institute. Both **Samson Laup** and **Titus Kakul** have been working on developing neem based/ low cost control methods for rhinoceros beetle in coconuts. Titus has been visiting the Markham valley for needs seeds. Some promising results has been achieved from this work.

Lastus KUNIATA

QUEENSLAND – NORTH

AQIS – CAIRNS

Kylie Anderson has been involved in a very exciting development over the past few months. She will be undertaking a Sugar Research Development Corporation funded PhD entitled 'Invasion potential of *Eumetopina flavipes* Muir, vector of Ramu Stunt disease of Sugarcane' from June this year. *Eumetopina flavipes* is a delphacid planthopper that probably originated from PNG, and has been present on sugarcane on the NPA for at least 20 years, but doesn't appear to have spread further south. Kylie will be on three years leave without pay from AQIS, and will be surveying sites at Bamaga, and various islands in the Torres Strait to investigate (i) the role of host usage in successful new region colonisation by an invader, (ii) the relative importance of other biological parameters that enable an invader to successfully colonise a new region and, (iii) develop a model that will enable the prediction of invasive potential by utilising data on the dispersal and migration routes, the history of habitat expansion and inter-population movement of *E. flavipes* to provide tools for the management of future incursions. Kylie's supervisors are **Brad Congdon** (JCU) and **Mohamed Sallam** (BSES) with **Meron Zalucki** (UQ) as a committee member. Logistical in-kind support from AQIS will ensure the remote components of the project are achievable. The ICE was a fantastic meeting place for delphacid researchers from Darwin (**Glenn Bellis**), Wales (**Mike Wilson**) and Delaware (**Charles Bartlett**), and these entomologists are all keen to see specimens Kylie will collect during her studies.

Kylie ANDERSON

AQIS – MAREEBA

The survey and fruit fly incursion season has kicked-off in northern Queensland. In early February **Kerrie Huxham** checked that all our fruit fly traps in Torres Strait were fully operational, a few weeks later the winds swung around to the north-west and delivered our first batch of exotic fruit flies for this season to islands in the east of Torres Strait. This small incursion is now under active control by Quarantine staff on the islands with support from NAQS staff in Mareeba and DPI&F staff in Cairns. In mid February all NAQS Mareeba staff attended Rotary Operations Safety Training in preparation for travel by Helicopter when working in Torres Strait. In March **Barbara Waterhouse** and **Judy Grimshaw** participated in two surveys, one in the Northern Peninsula Area of Cape York Peninsula (the communities of Bamaga, Seisia, New Mapoon, Injinoo & Umagico) and one in the Weipa area (Weipa, Mapoon, Scherger RAAF base and Napranum). These two surveys will be the last NAQS surveys for Judy, who has decided to 'hang-up' the AQIS badge and take a long break prior to retirement in early 2006. The areas visited on survey looked magnificent as a result of the heavy rains (which only slightly disrupted the work). Dark-red soil, rich green foliage and heavy black clouds made for an impressive backdrop to the work. **Donna MacLeod** travelled to Torres Strait in early April to participate in a plant-health survey.

Judy GRIMSHAW

NR&M – CHARTERS TOWERS

A recent April news clip from NR&M Charters Towers advised of the confirmation of the presence of *Chiasmia assimilis*, the biological control agent for prickly acacia, on properties between Home Hill and Bowen. *Chiasmia assimilis* was introduced from South Africa in 2002 at a number of coastal and inland sites around Queensland. More than 75,000 adults were released with establishment at all coastal infestations within the first year. Small numbers of the insect were found at various sites during 2003. After the heavy rains of January 2004 large numbers of adults and larvae were seen again at the sites. Landholders have now reported hundreds of small moths and caterpillars, together with large areas of partial to total defoliation of prickly acacia. This is the largest outbreak to date but it's still too early to say how long it will last, or if it will move through all sites in a similar way. The insect was imported through the Alan Fletcher Research Station after thorough testing. Prickly acacia is one of the three most serious weed threats in northern Australia. A native to India and Pakistan, in Australia it is a declared pest that infests millions of hectares of land, causing soil erosion, water loss and increased mustering costs, with the potential to convert grasslands into thorny wastelands. This very safe biocontrol agent has a limited host range and poses no threat to any native plant or crop.

Catherine LOCKETT

BSES – MERINGA

Mohamed Sallam reports that after a 3-years period of low cane grub pressure, the greyback cane grub (*Dermolepida albohirtum*) is kicking back in. BSES monitoring team is encountering high levels of grubs and associated damage in several cane growing areas of Queensland. During April - May, BSES teamwork will be conducting GrubPlan sessions. GrubPlan is a grower-oriented workshop where monitoring results are shown to cane growers with advice on their best management options. Another grub species, *Lepidiota frenchi*, is also reappearing in north Queensland after a period of low occurrence. BSES encourages growers to participate in grub monitoring and risk assessment to be better prepared for possible outbreak in grub populations.

Mohammed SALLAM

DPI&F - South Johnstone

David Astridge is starting a new ACIAR IPM project developing IPM systems in Mango (Philippines / Australia). David caught up with **Geoff Waite** (Maroochy) and **Harry Fay** in Mareeba in March for the ACIAR project-planning meeting.

David ASTRIDGE

Jayne ROYER and Kerrie HUXHAM thank their northern colleagues for these contributions.

QUEENSLAND - SOUTH

DPI&F

Indooroopilly

Visiting scientist Dr **Irineu Lorini** returned to the Brazilian Agricultural Research Corporation in February after a one year sabbatical with **Pat Collins** and colleagues in the Food Protection Team. During his stay he investigated phosphine resistance in Brazilian strains of the lesser grain borer, *Rhyzopertha dominica*, under AQIS permit. He also found time to participate in field trials, spend time with the WA Department of Agriculture, and co-chair a session of the International Conference on Controlled Atmosphere and Fumigation (CAF) held during August 2004. **Greg Daglish** and **Manoj Nayak** are nearing completion of their GRDC funded evaluation of the bacterial-derived insecticide, spinosad, and are in the process of publishing their findings.

Market Access Team Horticulture and Forestry

Members of the Horticulture Market Access Team in DPI&F have been very busy in recent months with a variety of activities, not all of them entomological. Team Leader, **Annice Lloyd,** and researchers, **Ed Hamacek and Pauline Wyatt,** attended the Australian Citrus Growers Conference at Bargara and presented papers on two of their current HAL projects - the area wide fruit fly management program and the citrus black spot management project, both in the Central Burnett. The citrus black spot project, lead by Pauline, is expanding the team's expertise to deal with a non-entomological market access problem which currently prevents access for Queensland citrus to the lucrative US market. Both projects are progressing well which is good news for the beleaguered Queensland citrus industry suffering the effects of the recent citrus canker incursion. Cairns team member, disinfestation entomologist, **Peter Leach**, recently visited Korea as the Australian government representative at an international forum on the use of irradiation in the food industry, a potential quarantine treatment to expand export of horticultural commodities in the future. **Liz Hall** and **Dawn Scanella** in Cairns are beginning a new project to develop a non-damaging heat treatment for fruit fly in capsicums so that domestic and export market access can be maintained if current chemical postharvest

treatments are not available in the future. Other team members, **Chris Neale, Thelma Peek and Marianne Eelkema** have been elbow deep in mango juice while assessing fruit fly infestation in thousands of fruit from a baiting field trial undertaken at Mareeba with assistance from local DPI&F entomologist, **Bruno Pinese.**

Gatton

Silverleaf whitefly (SLW) remains a focus for vegetable entomologists in the Lockyer Valley Queensland. **John Duff** is investigating soil-applied insecticides for the control of SLW in beans, as part of an IPM in beans project. This notorious pest has already wiped out John's first planting. **Bronwyn Walsh** is looking at the economic impact of SLW in *brassica* vegetables. Results from Brendan Nolan's assessment of SLW development on four types of *brassica* vegetable crops, broccoli, cabbage, cauliflower and Chinese cabbage, indicate mortality in all treatments, particularly Chinese cabbage, was highest during the egg and early nymph stage. Chinese cabbage appears largely unsuitable for SLW development.

In addition, Brendan's ladybird project, supported by Horticulture Australia Ltd, commenced in December 2004. Research has started to find whether the white-collared ladybird (*Hippodamia variegata*) can help vegetable growers control insect pests. DPI&F Senior Entomologist, Dr.**Bernie Franzmann**, first discovered the ladybird in the Gatton district in 2000. Brendan will investigate whether it has a role in IPM strategies used by Australian Brassica growers to reduce chemical insect control and crop damage.

Applethorpe

John Hargreaves moved to Applethorpe in March following **Frank Page**'s retirement last July. He is presently purging the office/laboratory and would not be surprised if he unearths the Arc of the Covenant in the recesses of Frank's cupboards.

Alan Fletcher Research Station

Michael Day travelled to PNG as part of the ACIAR-funded biocontrol of chromolaena project. The gall-fly *Cecidochares connexa* is now found in 11 of the 12 provinces where chromolaena is present and is spreading from most areas where it has been released. Plant density is decreasing in many areas where the fly has established, particularly in Sandaun and New Ireland provinces.

K. Dhileepan attended the Canopy Killers: Landcare Meeting, held at Maleny, Queensland on 25th February 2005 and presented a talk titled "Biological control of cats claw creeper: progress and prospects".

Bill Palmer, K. Dhileepan, Michael Day, **S. Raghu**, **Peter Jones**, **Wilmot Senaratne**, **Liz Snow** and **Tanya McAndrew** gave presentations at the Biological Control of Tropical Weeds course held at Brisbane during 4th to 15th April 2005.

S. Raghu, who worked as postdoc with the Weeds CRC based at AFRS, has been offered a position with the Centre for Ecological Entomology at the Illinois Natural History Survey and the University of Illinois at Urbana-Champaign. He will be making the trip across the Pacific at the end of April to take up his new role.

K. DHILEEPAN

Army Malaria Institute (AMI).

Rob Marlow spent a month in February and March in Vanuatu with colleagues from the US Navy Medical Research Unit No. 2, Jakarta, Indonesia. They were conducting malaria surveillance in villages on Milos Island. **Steve Frances** has been conducting a field trial at Tin Can Bay, Qld, to evaluate the effectiveness and persistence of 2 insecticides for the treatment of military tent fabrics.

In early December **Cassie Jansen** left AMI to commence a PhD program at the Department of Microbiology and Parasitology, University of Queensland. She also presented her Honours research at the December meeting of the Queensland Entomological Society. **Raethea Huggins** also left the unit in mid January after 3 years at AMI. **Donna Mackenzie** joined the institute in February.

University of Queensland

Mike Furlong travelled to Fiji and Samoa in February with **Max Whitten** to help develop an ACIAR project on Brassica pest management. By all accounts it was a good trip!

Meron Zalucki went to Oman in early February to help **Farid Talukder** with some termite problems. He has been invited back again so he could not have trodden on too many toes.

Congratulations to **Jan Green**, **Brenton Peters** and **Bernie Franzmann** who were all awarded PhD in the last 6 months. With **Mark Wade**, **Sarina Pearce** and **Ian Newton** finishing early last year, rumour has it that their supervisor has nothing to do these days!

Sampath Walgama has returned to Sri Lanka and will be writing his thesis from the Tea Research Institute.

Aaron Stewart has well and truly began studies on how termites breach protective barriers with **Barry Noller**, **Rowan Truss** and Meron Zalucki as mentors. His "confirmation of candidature" comes up shortly. As it does for **Ngoc Quang Dao**, a Masters student from Vietnam working on red cedar tip moth oviposition on Chukrasia. Quang is on an

ACIAR fellowship and is being supervised by **Manon Griffiths** and Meron Zalucki.

Bronwyn WALSH

SOUTH AUSTRALIA

South Australian Research and Development Institute

Past and present members of the National Diamondback moth project have been recognized with a Victorian science award for their involvement in the development and promotion of an innovative crop sampling method.

Entomologist **Nancy Schellhorn** and Communications Coordinator **Dijana Jevremov** were part of the six member team of researchers awarded the *Daniel McAlpine Outstanding Achievement Award* at the Victorian Department of Primary Industries Science Awards 2005 held in Melbourne recently.

The Award recognises outstanding scientific achievement undertaken by Departmental staff in research, extension, or policy that contributes significantly to the sustainable economic growth of Victoria's land and resource based industries. Previous Victorian project partners **Peter Ridland**, **Nancy Endersby,** and **Andrew Hamilton** who compiled the entry, were instrumental in the Award being achieved.

The sampling method does away with mathematical complexity and was created to help brassica growers monitor their crops efficiently to determine when to take action to protect their crops from damaging levels of the diamondback moth.

The method used to create the sampling plan has since been modified to monitor vast colonies of birds at Lake Borrie near Werribee, and the team expects that the new sampling techniques will find application around the world monitoring everything from endangered animal populations to pest and disease epidemics.

Angela Lush has recently completed her research program "*Field and postharvest control of snails in citrus*" which was funded by HAL and Australian citrus growers. Since completion of the snail program Angela has joined the Diamondback moth team now being led by **Greg Baker**. Angela is also in the final stages of writing her PhD on the biology and ecology of the small brown snail (*Microxeromagna armillata*) in citrus. During this program Angela developed a new technique to study snail movement using a dye to highlight snail trails in the field and described the lifecycle of *M. armillata* for the first time.

The willow sawfly, *Nematis oligosphilus*

Willow sawfly (*Nematus oligosphilus*) family Tethredinidae a relatively new incursion to Australia, has recently been found damaging willows at Upper Sturt in the Adelaide Hills. The willow sawfly feeds exclusively on Willows and is widely distributed through the Northern Hemisphere and detected in New Zealand in 1997. **Ken Henry**, Greg Baker, and **Susan Ivory** inspected the Upper Sturt site in late February to find the larvae totally defoliating a number of Willow trees in the area. It has since been found throughout the Adelaide Hills from Meadows north to Gumeracha. The most severe damage has been Golden Willows at Upper Sturt, Mylor and Verdun.

Sandra McDougall of NSW Agriculture visited Greg Baker and **Tony Burfield** in February and addressed SA lettuce growers on IPM and contingency planning for lettuce aphid. Later the group visited the Re-vegetation by Design Project demonstration plots at Virginia on the Northern Adelaide Plain. **Glenys Wood** was able walk the group through stands of native saltbushes and bush food plants that are now well established and have been extensively sampled for pest and beneficial insects. Sandra was very interested to see which plants support beneficial insects and rarely harbour insect vectors of Tomato Spotted Wilt Virus (TSWV).

Proud recipients of the Daniel McAlpine Outstanding Achievement Award (left to right) Dijana Jevremov, Graham Hepworth, Hon. Bob Cameron Minister for Agriculture, Andrew Hamilton, Peter Ridland, Nancy Endersby. (Nancy Schellhorn was unable to attend due to work commitments)

The Snail Management Advisory Group (SMAG) met recently to discuss developments in snail control through several research projects spanning SARDI Entomology, the University of Adelaide, the University of South Australia, CSIRO Entomology and the Yorke Peninsula Alkaline Soils Group. **Megan Leyson** and **Dennis Hopkins** presented results from current snail management research in the SARDI Entomology Unit. The biological control agent for conical snail management, *Sarcophaga penicillata*, is now established on the lower Yorke Peninsula and has dispersed up to 7km from release sites since releases began in 2000. Megan finishes her current research contract with SARDI Entomology in July 2005. She will be moving to the UK to pursue entomology work and also to achieve some personal goals of work and travel throughout Europe.

The South Australian Research and Development Institute (SARDI) are the first to operate a commercial European wasp baiting service under a minor use permit. This year the baiting service, run by Dennis Hopkins, **Nola Lucas** and **Kym Perry** was the culmination of more than 8 years of research into a technique for baiting European wasps in areas where nests cannot be located or easily accessed. The new bait is a mix of protein and insecticide and relies on foraging wasps taking it back to the nest. There was significant demand for the service throughout metropolitan Adelaide and some regional areas, with successful wasp control achieved at most sites. It is hoped the technology will continue to be available in subsequent wasp seasons under a minor use permit pending the full registration of a bait product for home use.

Waite Insect and Nematode Collection:

John Jennings reports that databasing for the Australian Plant Pest Database funded by Plant Health Australia has continued apace, with more than 60,000 records now added, or about 12-15% of the collection. We have also purchased several more cabinets to hold the ever expanding collection.

University of Adelaide

John Jennings has sent out a survey of employment of entomologists to Australian employers of entomologists - Universities, CSIRO, government departments, Museums, and private companies. The results will be made available in the next issue of *Myrmecia*. It will be most interesting to compare employment trends since the first survey in 1996 and the second in 2000.

John Jennings has been out and around talking about the newly established Kangaroo Island LTER (Long-Term Ecological Research) site. He has visited the island, spoken on radio, and talked to Friends groups of several National Parks. See http://www.affa.gov.au/content/output.cfm?ObjectID=D2C48F86-BA1A-11A1-A2200060B0A06369 Pity about the URL! (you can also try http://tinyurl.com/7jueq, which will take you to the same page – ED)

Jo Kent has nearly finished writing up her thesis and is currently undertaking all the paperwork for a job in the ol' US of A. It will be a year long contract at The Valdosta State University in Valdosta, Georgia (very near to the border of Florida) where she will be teaching undergrads about the joys of evolution and genetics as well as getting involved with collaborations on some research projects in population genetics of various critters. The position begins in August.

Chris Madden, fresh water entomologist formally of SA Water, is now consulting on a project at Flinders University looking at using invertebrates for determining the success of low flow bypasses on farm dams. In addition he is participating in Department of Environment and Heritage Murray Flood Plains survey identifying invertebrate samples

Glenys WOOD

TASMANIA

Forestry Tasmania

It's been a busy summer of insect sampling, sorting and experimentation. On the conservation biology front, **Belinda Yaxley** has been joined in her lab-based saproxylic sample-sorting by **Bronwyn Appleby**. Along with **Dick Bashford**, they have been generating drawers full of pinned beetles from a range of conservation-related projects, which now await identification and analysis over the coming winter, primarily by **Simon Grove**. In April we hosted a visit by Curtin University honours student **Ross Gordon**. Ross was over in Tasmania for a week to gain field and lab experience in some of the issues surrounding sampling coarse woody debris and its invertebrates, in preparation for his research on mining rehabilitation in jarrah woodland in WA. **Marie Yee** has now joined FT as a conservation planner, replacing **Jeff Meggs** who has moved to Canada to join his new wife Melissa in British Columbia (Jeff met Melissa when he was on a study tour examining dead wood management and conservation issues overseas). Marie has recently submitted her doctoral thesis from the University of Tasmania on saproxylic insects, and hence brings some highly relevant research experience to FT, though her role will also extend to many other conservation planning issues. She has already helped oversee projects on insects and fuelwood harvesting impacts, and on giant velvetworms.

Dick Bashford gave a presentation on the Port Surrounds exotic insect trapping system to the Victorian FHAC in Melbourne in February. In March, he gave evidence in Longford to the House of Representatives Standing Committee inquiry into the impact on agriculture of pest animals. And in April he attended the Plant Health Australia workshop on national surveillance and the diagnostic network in Hobart. Dick also hosted a visit by **Dean Satchell** of the New Zealand Farm Forestry Association's Eucalyptus Action Group. Dean was in Tasmania looking at alternative psyllid/acacia food sources for the ladybird *Cleobora mellyi*.

Jane Elek has been hosting a visit from **Camille Monjaret** from the Institut National Agronomique in France. Camille has been helping with research on the attractive chemical agents that may be present in plantation eucalypts, to see if it might be possible to establish 'trap' trees (trees that are particularly susceptible to the main insect pests), which could then be targeted for treatment with insecticides. Part of this work is involving testing various means of delivering pesticides to reduce reliance on aerial spraying - for instance, applying insecticidal 'paint' to the trunk, applying solid insecticides around the base of the stem, and stem injection.

Department of Primary Industries, Water and Environment

Tasmanian Cherries to Japan. Tasmanian cherry growers were recently allowed entry into the lucrative Japanese export market. This represents a significant milestone for the Tasmanian cherry industry and cherry exports will begin in the 2005/06 season. This achievement is the culmination of years of work by the entomology staff of DPIWE. Due to the absence of codling moth (*Cydia pomonella*: Tortricidiae) in Japan, these experimental trials were required by Japan to demonstrate that Tasmanian quarantine protocols can destroy codling moth eggs that may be present on exported fruit. A large component of this work is the cultivation and maintenance of a large codling moth culture at the New Town Research Laboratories. This culture is the only one of its kind in the Southern Hemisphere and continues to provide a valuable resource for work on orchard fruit in Tasmania. The establishment of a successful quarantine protocol for codling moths in Tasmanian

cherries has been founded on many years of similar experimental work on Tasmanian apples destined for export to Japan since the early 1990's. **Margaret Williams** headed this important work and was instrumental in developing the experimental trials needed to demonstrate the efficacy of Tasmanian quarantine protocols. **Owen Seeman**, now based at the Queensland Museum, did the groundwork on Tasmanian cherries, which drew extensively on earlier work by the Department of Agriculture NSW lead by Andrew Jessup. More recently **Cathy Young**, **Graeme Anderson** and the cherry export team of Diagnostic Services, at DPIWE successfully completed the final experimental trials needed to lift the ban on the export of Tasmanian cherries to Japan.

***Currant-Bud Moth* (Stathmopoda chalcotypa).** *Stathmopoda chalcotypa* is a native oecophorid moth that occurs in southern Queensland, New South Wales, Victoria and Tasmania. The larvae of this species and of *S. cephalaea* have been found feeding in the galls caused by the rust fungus *Uromycladium tepparium* on *Acacia* species including *A. dealbata* and *A. decurrens*. The species has been recorded feeding inside the buds of black currant bushes in Tasmania but until recently, it was thought to be of rare occurrence in currants and only a minor pest. However recent observations and work by staff of DPIWE and by blackcurrant growers have revealed that this species causes much more damage than previously thought, with some growers reporting up to 20% of buds destroyed by the larvae. Focus will now be on establishing the life cycle of the moth and possible control measures.

***Pests of Myrtus ugni* (Chilean guava).** Cultivation of this bush for its distinctive berries (tradename Tazziberry) has recently become a popular choice for Tasmanian growers wishing to diversify their fruit crops. The fruit is a blueberry sized red berry that tastes like a cross between a strawberry, apple and pineapple. As with many fruit industries in their infancy, *M. ugni* has been heralded as a disease and pest free plant. However, new insect pests of *M. ugni* have recently come to the notice of entomologists at DPIWE. One grower reported large losses to the harlequin bug *Dindymus versicolor*, where bugs completely destroyed berries by sucking out fruit contents. In another crop, caterpillars of *Epiphyas postvittana* (Light Brown Apple Moth) (Tortricidae) were found infesting the berries and larvae of *Ectropis excursaria* (Twig Looper) (Geometridae) consuming leaves. The native shield bug *Anaxilaus vesiculosis* was also found attacking the leaves and fruit of the *Myrtus* bushes. Most damage was caused by *E. postvittana*, both because of damage to fruit and unsightly webbing. All of these insect species are Australian natives.

Cathy YOUNG

University of Tasmania

Evolutionary relationships of the Australian Emerald Moths (Geometridae: Geometrinae) from molecular and morphological characters. Work is in full swing on this group of Australian native moths by Cathy Young (DPIWE) and **Peter McQuillan** (School of Geography and Environmental Studies). Representatives of approximately 40 genera of this group are being characterised using molecular and morphological data. To date sequences from the 28S D2 gene have been obtained from approximately 20 genera and primers are being designed for the protein-coding nuclear gene LW Rhodopsin. A conserved morphological character set has been constructed for the group and good progress has been made in dissecting and describing the representative species. A limited number of species are also being reared to obtain immature data.

Meanwhile, in the School of Zoology, **Sue Baker** is analysing and writing up her PhD research into riparian effects on litter dwelling beetles adjacent to first order streams in native wet *Eucalyptus obliqua* forest. She is also working part-time with **Bob Barbour** and **Brad Potts** on a project examining extended phenotype effects of plantation *E. globulus* provenances. Provenance effects on plant and soil chemistry, decomposition processes and the litter invertebrate community are being assessed.

Dave de Little (Tasmania-based independent forest health consultant) has just returned from a tour of South American forestry companies that grow eucalypts (principally *Eucalyptus globulus*) in plantations. The main purpose of the study tour was to observe progress with clonal eucalypt plantations. This method of establishing plantations is now operational even in the cool temperate eucalypts in Chile and Uruguay. With many companies adopting Forest Stewardship Council Certification, involving virtually no use of chemical pesticides in relation to their forestry practices, clonal strategies assume much more significance as a means of combating production loss due to pests and disease. Adults and larvae of the weevil *Gonipterus scutellatus* were observed in Uruguay, and damage due to the weevil was also observed in Chile. Lerps of a species of *Glycaspis* were also observed on foliage of *Eucalyptus saligna* in Uruguay.

Tasmanian invertebrate folk enjoying a late summer BBQ at Hobart's Waterworks Reserve. Photo: Simon Grove

Tasmanian Ento BBQ

This summer's annual social event, 'organised' by yours truly, was a lunchtime barbeque at Hobart's Waterworks Reserve in late March, attended by about twenty people with an interest in 'the spineless majority'. Participants were mostly from the Hobart area but included a contingent from the Queen Victoria Museum in Launceston.

Simon GROVE

WESTERN AUSTRALIA

Department of Agriculture WA

Manjimup

In January 2005, a call from an orchard scout in the Manjimup apple district concerning the possible presence of European red mite (ERM) in WA caused a flurry of activity. **Stewart Learmonth** and other members of the WA HORTGUARD program swung into action. **Danuta Knihinicki** of NSW Dept Primary Industries confirmed the mite's identity as ERM. A small local survey showed the mite to be present in two other orchards in the Manjimup district. Subsequently, a fourth orchard in the Pemberton area was also a confirmed presence. Despite crop scouts already checking for mites in the Perth Hills and Donnybrook orchard areas, no other sightings were reported. Industry representatives were advised. After a review of the cost of scenarios such as undertaking a state wide survey, not to mention eradication costs if that was going to be a course of action, the industry was happy to declare the pest endemic. The main reasons for doing so were that the mite is unlikely to impinge on trade of WA products, and ERM is unlikely to be a major pest in WA's climate. WA already has two-spotted mite as a pest with many of the ERM chemicals already being used for its control and "softer" oil sprays are more effective against ERM. As WA gets more experience with the pest status of ERM in coming seasons, actions such as introducing other predatory mites may be considered.

South Perth
In March **Grant Herron** from NSW Agriculture visited **Sonya Broughton** and **David Cousins** to discuss and review their collaborative project on western flower thrips. Western flower thrips was also the topic of discussion at a grower's meeting in the Perth Hills in March, with growers complaining that they had lost up to 10% loss of stonefruit to thrips damage. Consensus was that white-fleshed nectarines and peaches seem to be the varieties hardest hit. Sonya and David were also kept busy in April sampling for parasites and predators of black scale in olives.

AQIS

Chris Norwood, **Shirani Poogoda** and other AQIS Entomology staff have moved out of South Perth and into their new laboratory at Perth International Airport.

Curtin University of Technology

The entomology laboratory has been temporarily vacated, with **Karl Brennan** and **Melinda Moir** departing to the University of Melbourne, where they will be working with the Bushfires CRC. Curtin PhD student, **Nihara Gunawardene**, has also left for Sri Lanka, where she will be undertaking fieldwork on rainforest ants in the Sinharaja Forest Reserve. Her supervisor, **Jonathan Majer** recently visited Nihara to assist with the design of study plots.
Whist there, Jonathan visited Nihara's co-supervisor, **Jayanthi Edirinsinge** (a PhD graduate from the Waite Institute) and presented a seminar at the University of Peredeniya on the topic of Australian canopy research.
These departures have been partly compensated for by the return of **Brian Heterick** who returned to Curtin University at the beginning of 2005 to resume research, after a two year stint as an E. Schlinger Postdoctoral Fellow at the California Academy of Sciences, California. Brian revised the Malagasy members of the genus *Monomorium*, describing 19 new species out of a total fauna of 36 species for the Island [MS submitted]. As well as working on *Monomorium*, he was also a tutor at an ant course at Costa Rica, and had a run in with Uncle Sam at George Bush Airport on the way back home (this involved a confiscated money-belt and a not sufficiently up-to-date visa). On the credit side, he visited a beautiful part of Michigan and had lunch with **E. O. Wilson** during a visit to Harvard.
Anita Lyons is soon to return to Curtin to commence o PhD on the entomology of oil mallee plantations. Also working in the lab are three new honours students: **Caroline Staub** - post-harvest infestation of fruit by fruit flies; **Dustin Severtsen** - the possible economic use of termites that degrade paper refuse; and **Ross Gordon** - comparison of invertebrates associated with logs in rehabilitated bauxite mines and adjacent jarrah forest.

Conservation and Land Management

Paul Van Heurck is writing up a joint WWF/CALM study on the impact of spring and autumn prescribed fires on the biodiversity of litter beetles in the northern jarrah forest. As of this year he has also commenced a PhD on the impact of fine grain mosaic and prescribed fires on forest floor invertebrate biodiversity in the southern forest near Walpole. The remainer of his time is spent working with **Allan Wills** and **Janet Farr** on the FORESTCHECK project monitoring logging impacts on invertebrate biodiversity.

CONFERENCE ANNOUNCEMENTS

Third International Congress on Phthiraptera (ICP3).

The executive committee** established during ICP2 and charged with the organizing of the next Congress has set the dates and place:
16 - 21 October, 2006 at Buenos Aires, Argentina
This first communication seeks to verify your email address and ascertain your interest in receiving additional information on the Third International Congress on Phthiraptera (ICP3).
English and Spanish will be the official languages of the Congress. There will be simultaneous translation of oral presentations. Abstracts and posters will be in English.
Please respond to this inquiry using the 'REPLY' function on the top menu of your email program, and indicate if you do, or do not, wish to receive additional information on ICP3.
In addition, the committee would greatly appreciate the names and email addresses of colleagues who should be included in this first notice. This initial mailing went to attendees of ICP2 and a few additional contacts.
This mailing list will be used exclusively for ICP3 communications and will not be made available to any other parties or for any other uses. Please forward this email to any colleague you believe may be interested.
Sincerely,
Bob
Robert C. Dalgleish, Ph.D., F.R.E.S.
U.S. National Museum Natural History, Research Associate
For: ** María I. Picollo (Argentina, chair), Steve Barker (Australia), Bob Dalgleish (U.S.A.), Kosta Mumcuoglu (Israel), and Lajos Rozsa (Hungary)

Combined Conferences of the Australian Entomological Society, Society of Australian Systematic Biologists and Invertebrate Biodiversity and Conservation, Canberra, December 4-9 2005.

See www.invertebrates2005.com
This combined conference will also incorporate the 36th Annual General Meeting of the Australian Entomological Society and a meeting of the Australian Chapter of the International Union for the Study of Social Insects.
The venue is the Manning Clarke Centre on the campus of the Australian National University. Keynote speakers, and symposia that have already been accepted, are listed on the website.
Symposia suggestions are being incorporated into the scientific program now, and we welcome further symposium suggestions via the online form on the website. The first call for papers will be in May.
On behalf of the organizing committee we look forward to seeing you all at the conference. For any additional information please contact the Conference Organiser Sally Brown (sally.brown@uq.edu.au).

David YEATES and Sally BROWN

THE AUSTRALIAN ENTOMOLOGIST

The Australian Entomologist is a non-profit, refereed journal published in four parts annually by the Entomological Society of Queensland and is devoted to entomology of the Australian Region, including New Zealand, Papua New Guinea and islands of the south-western Pacific. Articles for publication are accepted from members and non-members of the Society and may deal with any aspect of entomology but there is a natural emphasis on works dealing with the native fauna of the region. Colour ilustrations are a feature of the magazine. The journal is produced as an independent publication and subscription is not included with membership of the Society.

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